UNITED STATES PATENT AND TRADEMARK OFFICE

APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
12/371,197	02/13/2009	Andrew Dolganow	ALC 3461	7142

76614   7590   01/25/2017
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ART UNIT	PAPER NUMBER
2434	

NOTIFICATION DATE	DELIVERY MODE
01/25/2017	ELECTRONIC

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UNITED STATES PATENT AND TRADEMARK OFFICE

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BEFORE THE PATENT TRIAL AND APPEAL BOARD

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Ex parte ANDREW DOLGANOW, JASON RUSMISEL, and
STEVE MORIN

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Appeal 2016-002666
Application 12/371,197
Technology Center 2400

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Before ST. JOHN COURTENAY III, THU A. DANG, and
LARRY J. HUME, *Administrative Patent Judges.*

COURTENAY, *Administrative Patent Judge.*

DECISION ON APPEAL

STATEMENT OF THE CASE

This is an appeal under 35 U.S.C. § 134(a) from the Examiner's Final
Rejection of claims 1–20, which are all the claims pending in the
application. We have jurisdiction under 35 U.S.C. § 6(b).

We Affirm.

Invention

The claimed invention on appeal relates to "management of traffic in
a telecommunications network and, more particularly, to managing
transmission of peer-to-peer content over such a network." (Spec. ¶ 1).

Representative Claim

1. A method for managing transmission of peer-to-peer (P2P) content over a telecommunications network, the method comprising:

   receiving a plurality of packets belonging to an Internet Protocol (IP) flow between a source peer and a destination peer in a network element in the telecommunications network;

   performing deep packet inspection (DPI) to identify an application protocol associated with the IP flow, wherein the P2P content uses a P2P protocol;

   performing DPI to extract keys from the packets in the IP flow, each extracted key uniquely identifying the P2P content associated with the IP flow;

   populating a P2P content database with the extracted keys;

   querying the populated P2P content database by comparing the extracted keys to key fields in the P2P content database, [L1] *wherein* **each** *key field in the P2P content database corresponds to a respective traffic management action field*; and

   [L2] *performing a traffic management action associated with the traffic management action field corresponding to the key field in the P2P content database.*

(Contested limitations L1 and L2 bracketed and emphasized).

Related Appeals

This appeal is related to PTAB Decision 2012-011913, Application No. 12/371,197 (same as instant application), mailed on February 2, 2015. (Examiner Affirmed).

Rejections

A. Claims 1, 3–7, 9, 11–14, and 16–20 are rejected under 35 U.S.C.
   § 103(a) as being obvious over the combined teachings and
   suggestions of Twiss (US 2008/0049619 A1; publ. Feb. 28, 2008),
   Ray (US 2009/0238071 A1; publ. Sept. 24, 2009), and Oberlander
   (US 5,509,000; iss. Apr. 16, 1996).

B. Claims 2 and 10 are rejected under 35 U.S.C. § 103(a) as being
   obvious over the combined teachings and suggestions of Twiss, Ray,
   Oberlander, and Cohen (US 2007/0297417 A1; publ. Dec. 27, 2007).

C. Claims 8 and 15 are rejected under 35 U.S.C. § 103(a) as being
   obvious over the combined teachings and suggestions of Twiss, Ray,
   Oberlander, and Mahmood (US 2004/0213198 A1; publ.
   Oct. 28, 2004).

Grouping of Claims

Based on Appellants' arguments, we decide the appeal of rejection A
of claims 1, 3, 4, 9, 11–14, and 16–20 on the basis of representative claim 1.
See 37 C.F.R. § 41.37(c)(1)(iv). We address rejection A of separately
argued claims 5, 6, and 7, *infra*. Rejections B and C are not substantively or
separately argued, and are addressed *infra*.

ANALYSIS

We have considered all of Appellants' arguments and any evidence
presented. We find Appellants' arguments unpersuasive for the reasons
discussed *infra*. We adopt as our own: (1) the findings and legal conclusions
set forth by the Examiner in the Final Office Action from which this appeal
is taken, and (2) the findings, legal conclusions, and explanations set forth in
the Answer in response to Appellants' arguments (Ans. 23–33). We

highlight and address specific findings and arguments for emphasis in our analysis below.

Rejection A of Representative Claim 1

Appellants substantively contest limitation L1: "*wherein each key field in the P2P content database corresponds to a respective traffic management action field . . . .*" (Emphasis added) (App. Br. 6). Further, regarding limitation L2, Appellants (*id.*) contend:

> On pages 2 and 3, the final Office Action further alleged that Ray's data field 375 may include DPI information. In particular, the Examiner cites a list of DPI inspection codes. However, the Examiner ignores the required correspondence for each key field in the P2P content database with a respective traffic management action field.

Emphasis omitted.

In the principal and Reply Briefs, Appellants repeatedly emphasize the use of the word "**each**" as recited in contested limitation L1 ("*wherein* **each** *key field in the P2P content database corresponds to a respective traffic management action field*") (emphasis added). However, in reviewing the proffered support (App. Br. 2) for the claim term "each" (that was added by amendment to claim 1), we find no clear support in the sections of the Specification and drawings cited by Appellants. Therefore, we find a question is initially raised regarding whether the claim 1 amendment adding the word "each" has written description support under 35 U.S.C. § 112, first

paragraph.[1]

Turning to the question of obviousness, we decide the following issues presented in this appeal:

Issues: Under § 103, did the Examiner err by finding the cited combination of Twiss, Ray, and Oberlander would have collectively taught or suggested the contested limitations (with emphasis added):

> [L1] *wherein each key field in the P2P content database corresponds to a respective traffic management action field;*
>
> [L2] *performing a traffic management action associated with the traffic management action field corresponding to the key field in the P2P content database[,]*

within the meaning of claim 1?[2]

In reviewing the record, we find the Examiner reads the recited *"extracted keys"* (emphasis added) (i.e., extracted from the IP packet flow) which "uniquely [identify] the P2P content associated with the IP flow"

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[1] We leave this issue to the further consideration of the Examiner in the event of further prosecution of this application. Although the Board is authorized to reject claims under 37 C.F.R. § 41.50(b), no inference should be drawn when the Board elects not to do so. *See Manual of Patent Examining Procedure* (MPEP) § 1213.02 (9th Ed., Rev. 07.2015, Nov. 2015).

[2] We give the contested claim limitations the broadest reasonable interpretation consistent with the Specification. *See In re Morris*, 127 F.3d 1048, 1054 (Fed. Cir. 1997). *Cf.* Spec. ¶ 66 ("the foregoing disclosure, description, and figures are for illustrative purposes only and do not in any way limit the invention, which is defined only by the claims").

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(claim 1) on the **signatures** taught by Twiss ¶ 75 (*see* Ans. 6),[3] and as
additionally taught by Ray, e.g., ¶ 14:

> With **deep packet inspection, signatures** are used to identify
> specific **network applications and protocols** in use over a
> network. In their most broad sense, **signatures** are patterns of
> data bit "recipes" which are chosen to **uniquely identify an
> associated application or protocol.** When a new **application or
> protocol** is encountered, the **data packets** of the new application
> are analyzed and **an appropriate signature is developed and
> added to a database**, typically referred to as **a signature
> library**. In an embodiment of the invention, packets transmitted
> by a particular application or protocol are received, and the
> packets are analyzed using **deep packet inspection** to generate
> **a signature**. The **signature** may then be compared to entries in
> the **signature library**, and if a match is found, the data packets
> are identified as being associated with a particular application or
> protocol identified in the signature library.

Emphasis added. *See also* Ray ¶¶ 13, 20.[4]

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[3] *See* Twiss (¶ 75) ("A determination of whether payload data comprises
P2P typical data may be made by, in effect, masking out variable portions of
data in a protocol and then comparing the data to one or more known
allowed message formats which (preferably) serve as a **signature for the
P2P protocol** (or protocols) it is desired to control" (emphasis added).

[4] *See e.g.*, Ray (¶ 20):

> Results 215, 225, and 235 are provided to a signature generator
> module 240. The signature generator module 240 generates a
> **DPI signature 245** associated with the packet 180 based upon
> results 215, 225, and 235. The **DPI signature 245** is provided to
> **a signature lookup module** 250. The **signature lookup module
> 250** performs **a lookup of the DPI signature 245 from a
> signature library 260** to determine an identity 255 of one or
> more of a **particular application and protocol associated with**

Given this evidence, we find the described use of the signatures of Twiss (¶ 75) and Ray (¶¶ 13, 14), teaches or suggests contested limitation L1, as claimed. We further find both Twiss (Abstract) and Ray (¶ 3) are directed, at least in part, to the various issues associated with the routing of peer-to-peer (P2P) data. *See, e.g.*, Twiss ¶¶ 12, 42, Ray ¶ 3.

We find Ray's **signatures** (¶14) which **uniquely identify** applications or protocols associated with P2P content (¶ 14, "the **data packets** of the new application are analyzed and an appropriate **signature** is developed and **added to a database**, typically referred to as a signature library") (emphasis added), teach or suggest the recited "extracted keys" which populate "key fields in the P2P content database," i.e., "performing DPI to extract keys from the packets in the IP flow, **each** extracted key uniquely identifying the P2P content associated with the IP flow; . . . in the P2P content database [L1] wherein each key field . . . ." (Claim 1) (emphasis added).

Given this evidence (*id.*), we find Ray's **signatures** which are "added to a **database**, typically referred to as a signature library" (¶ 14) teach or at least suggest the claimed step of "populating a P2P content **database** with the extracted keys," within the meaning of claim 1. (emphasis added).

We find Ray's one-byte DPI inspection code information that is inserted into data field 375 of Ray's IP packet header (Fig. 3) teaches or suggests the contested "traffic management action field" as recited in

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> **the packet 180**. The identity 255 is provided to a DPI information generator 270 that functions to determine DPI information 265 based upon the identity 255.

Emphasis added.

contested limitation L2 of claim 1, because Ray's DPI inspection code is expressly described as being used for *traffic control purposes*. *See, e.g.,* Ray ¶ 23:

> The **DPI inspection code** instructs the centralized network controller **150** on the manner in which the packet and other traffic is to be handled **for traffic control purposes**. An example of DPI inspection codes includes: a '1' representing the stopping of sending packets, a '2' representing the slowing down of packets, a '3' representing the rerouting of traffic, a '4' representing the stopping of billing for traffic, a '9' representing the continuation of sending of traffic, an 'A' representing the pausing of the traffic, and a 'Z' representing the prioritizing of the traffic.

Emphasis added. See also Ray ¶ 13.

Thus, we find the Examiner's proffered combination of Twiss and Ray (and Oberlander) teaches or suggests all that is contested. The *extracted key* (Ray's unique signature), that uniquely identifies P2P content associated with the IP flow, is expressly taught as being "added to a database" (¶ 14). We note claim 1 does not positively recite that the "traffic management action field" is *actually stored as a field* in the "P2P content database" that is populated "with the extracted keys."

Ray's DPI inspection code (i.e., "traffic management action field" — claim 1) is stored in an IP packet header (Ray's data field 375, Fig. 3), instead of being stored in a database record (*Cf. with* the record field arrangement depicted in Appellants' Figure 2 — i.e., Key 210 and Action 230 fields).

Although not stored as fields within the same record in a database (as depicted in Appellants' Figure 2, but not claimed in claim 1), we nevertheless find Ray's P2P "signature" (i.e., "key field in the P2P content database" — claim 1) and DPI inspection code (i.e., "traffic management

action field" — claim 1) **correspond** to **each** other, in the manner described in Ray's paragraphs 20–23, within the meaning of Appellants' claim 1.

We additionally note the Examiner looks to the tertiary Oberlander reference to teach or suggest populating a database with keys. (Final Act. 8–9). Given the totality of the evidence relied upon by the Examiner, we find Appellants' claimed arrangement would not have been "uniquely challenging or difficult for one of ordinary skill in the art" at the time of Appellants' invention. *Leapfrog Enters., Inc. v. Fisher-Price, Inc.*, 485 F.3d 1157, 1162 (Fed. Cir. 2007) (citing *KSR Int'l Co. v. Teleflex, Inc.*, 550 U.S. 398, 418 (2007).

On this record, we find Appellants have not shown that Ray's **DPI inspection code** (¶ 23) (i.e., a "traffic management action field" — claim 1) that **corresponds** to Ray's DPI **signature** (¶ 20) **(**extracted key field – claim 1**)** that is "added to a database" (Ray ¶14) would have been anything "more than a combination of prior art elements according to known methods to yield predictable results." *KSR*, 550 U.S. at 416. Nor has Appellant provided objective evidence of secondary considerations (such as unexpected results) which our reviewing court guides "operates as a beneficial check on hindsight." *Cheese Sys., Inc. v. Tetra Pak Cheese and Powder Sys., Inc.*, 725 F.3d 1341, 1352 (Fed. Cir. 2013).

Therefore, on this record, and based upon a preponderance of the evidence, we find Appellants' arguments unavailing regarding contested limitations L1 and L2, for essentially the same reasons articulated by the Examiner in the Answer, and for the reasons further discussed above. Accordingly, we sustain rejection A of representative claim 1. The associated grouped claims fall with claim 1. *See "Grouping of Claims"*

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supra.

<div align="center">*Dependent claims 5 and 6*</div>

We note the contested steps of method claims 5 and 6 are each preceded by the same recited temporal *predicate condition*: "*when* the extracted key is not located in the P2P content database" (emphasis added) {then perform the recited contested step or act}. We particularly note the language of claims 5 and 6 does not expressly preclude performing the contested steps at *other times* when the predicate condition is *not satisfied.* For example, claims 5 and 6 do not positively recite performing the intended acts **only** "*when* the extracted key is not located in the P2P content database." (Emphasis added). Therefore, under a broad but reasonable interpretation, we conclude these conditional claims do not positively require the contested conditional limitations to ever be performed. *See Ex parte Schulhauser*, No. 2013-007847, at *9 (PTAB April 28, 2016) (precedential), holding:

> [t]he Examiner did not need to present evidence of the obviousness of the remaining method steps of claim 1 that are not required to be performed under a broadest reasonable interpretation of the claim (e.g., instances in which the electrocardiac signal data is not within the threshold electrocardiac criteria such that the condition precedent for the determining step and the remaining steps of claim 1 has not been met[;]

see also Ex parte Katz, No. 2010-006083, 2011 WL 514314, at *4–5 (BPAI Jan. 27, 2011).

Here, we apply the precedential guidance of *Schulhauser* to the contested conditional limitations of claims 5 and 6. Therefore, the Examiner need not present evidence establishing the obviousness of the conditional step, or the following steps, of method claims 5 and 6, because we conclude

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the recited conditional steps are not required to be performed under a broadest reasonable interpretation of the claim. Accordingly, we sustain rejection A of claims 5 and 6.

Dependent claim 7

Claim 7 recites: "The method for managing transmission of P2P content according to claim 1, wherein the traffic management action comprises: notifying a network management entity that a transfer involving the P2P content item has occurred."

As discussed above, the Examiner maps the recited "traffic management action field" of claim 1 to Ray's DPI inspection code (¶ 23). We find Ray (¶ 23) expressly teaches: "The DPI inspection code instructs [i.e. notifies] the centralized network controller 150 on the manner in which the packet and other traffic is to be handled for traffic control purposes."

Therefore, we find Ray teaches or at least suggests the contested notifying step.[5] Accordingly, we sustain rejection A of claim 7.

Rejections B and C

Appellants do not advance separate, substantive arguments and/or supporting evidence demonstrating error regarding the Examiner's rejection B of claims 2 and 10, and rejection C of claims 8 and 15. Instead, Appellants merely restate the purported deficiencies of the base combination

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[5] "[T]he question under 35 [U.S.C. §] 103 is not merely what the references expressly teach but what they would have suggested to one of ordinary skill in the art at the time the invention was made." *Merck & Co., Inc. v. Biocraft Labs., Inc.*, 874 F.2d 804, 807–08 (Fed. Cir. 1989), *cert. denied*, 493 U.S. 975 (Fed. Cir. 1989) (internal citation and quotation omitted); *see also* MPEP § 2123.

of references, as previously raised regarding Rejection A of independent claim 1. Arguments not made are considered waived. *See* 37 C.F.R. § 41.37(c)(1)(iv). Therefore, we sustain the Examiner's rejection B of claims 2 and 10, and rejection C of claims 8 and 15, for the same reasons discussed above regarding Rejection A of independent claim 1.

Reply Brief

To the extent Appellants may advance new arguments in the Reply Brief not in response to a shift in the Examiner's position in the Answer, we note arguments raised in a Reply Brief that were not raised in the Appeal Brief or are not responsive to arguments raised in the Examiner's Answer will not be considered except for good cause. *See* 37 C.F.R. § 41.41(b)(2).

Conclusion

For at least the aforementioned reasons, on this record, we are not persuaded the Examiner erred. We find a preponderance of the evidence supports the Examiner's underlying factual findings and ultimate legal conclusion of obviousness for all contested issues on appeal.

DECISION

We affirm the Examiner's decision rejecting claims 1–20 under § 103(a).

No time period for taking any subsequent action in connection with this appeal may be extended under 37 C.F.R. § 1.136(a). *See* 37 C.F.R. § 41.50(f).

AFFIRMED